Job No: CACE/BBMP/RS/W-12/2022-23

Name of Work :Augmentation of Water Supply throught Borewells Network of Pipelines and ground water Recharges facilities in areas layouts of Shettyhalli village, Abbigere Village & Chikkasandra Village in W.No.12, BBMP, Bangalore.

Name of Client	:	**Executive Engineer,** Dasarahalli Division, BBMP, Bangalore.
Contractor/Agency	:	**Sri R Shivaram , Contractor , Bangalore.**
Estimate Cost	:	Rs.210.00 Lakhs
Date of Inspection	:	21.12.2022
Status of Bill	:	1st and Final
In the Presence of	:	(a) **Assistant Engineer W.No.12,** BBMP, Bangalore.
	:	(b) **Mr. Girish,** Engineer
		M/s. Civil Design Consultants & Engineers

Sl.No	Description of the Item		Comments / observations
1	Geophysical investigation of site for Sinking borewell for supplying drinking water to the habitations either through the hand pump,MWS,P.W.S.S by vertical electrical sounding by adpoting venner or Schlumberger's method,including reconnaissance survey of Geological formation. Geophysical investigation of	:	Work done up to the billed quantity is satisfactory
	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burden upto 20 M fixing of casing pipes, collars and cap with necessary cutting and threading including transportation of rig and supporting	:	Work done up to the billed quantity is satisfactory
2	Ch 0.00 to 50.00	:	Work done up to the billed quantity is satisfactory
3	Ch 50.00 to 100.00	:	Work done up to the billed quantity is satisfactory

Signed

For CIVIL DESIGN CONSULTANTS AND ENGINEER

Authorised Signatory

Address:
1#125, First Floor, Sri Kumbeshwara Sahakara Bank Building, 2nd cross, 3rd main, Ramaiah layout, Nagasandra post, Bangalore - 560073
GSTIN: 29CJJPA0915Q1ZW
: consultantcivildesign@gmail.com
+91 86605 99020

Sl.No	Description of the Item		Comments / observations
4	Ch 100.00 to 150.00	:	Work done up to the billed quantity is satisfactory
5	Ch 150.00 to 200.00	:	Work done up to the billed quantity is satisfactory
6	Ch 200.00 to 250.00	:	Work done up to the billed quantity is satisfactory
7	Ch 250.00 to 300.00	:	Work done up to the billed quantity is satisfactory
8	Ch 300.00 to 350.00	:	Work done up to the billed quantity is satisfactory
9	Providing and fixing unplasticised PVC pipes with working pressure 10 kg/sq.cm with pipe fittings, clips, making good the floor, including cost of all materials, labour charges, HOM and testing complete as per specifications. -do- with 250mm outer dia (Casing Pipe)	:	Work done up to the billed quantity is satisfactory
10	Supply of ISI Mark 175mm nominal Bore, Plain end steel casing Pipe-grade of steel Fee 4100 of wakk	:	Work done up to the billed quantity is satisfactory
11	Providing 175mm Dia M.S. Collar	:	Work done up to the billed quantity is satisfactory
12	Providing 175mm dia Borewell Cap & Clamp Set	:	Work done up to the billed quantity is satisfactory
13	Submersible Three phase (6 inch/150mm) and other equipments pumps 15 HP/11KW (35 stage)	:	Work done up to the billed quantity is satisfactory
14	Providing and fixing in trenches galvinised/mild steel tube 50mm dia nominal bore with all fittings (earth work in trenches to be measured and paid for seperately) including cost of all materials,	:	Work done up to the billed quantity is satisfactory
15	Supplying and drawing 3 core flat PVC sheathed submersible pump cable maufactured with electrolytic grade copper with flexible copper with low resistance conductor confirming to table	:	Work done up to the billed quantity is satisfactory

Address:
1#125, First Floor, Sri Kumbeshwara Sahakara Bank Building, 2nd cross,
3rd main, Ramaiah layout, Nagasandra post, Bangalore - 560073
GSTIN: 29CJJPA0915Q1ZW

: consultantcivildesign@gmail.com
: +91 86605 99020

Sl.No	Description of the Item		Comments / observations
16	Providing and fixing in position 50mm Nominal bore non- return Valve verticle type of approved make including cost of all materials, labour HOM of equipment with all lead complete as per Specification	:	Work done up to the billed quantity is satisfactory
17	Spplying and fixing 50mm GI Union.	:	Work done up to the billed quantity is satisfactory
18	Spplying and fixing 50mm GI Elbow	:	Work done up to the billed quantity is satisfactory
19	Spplying and fixing 50mm GI Nipple.	:	Work done up to the billed quantity is satisfactory
20	Spplying and fixing 50mm GI Hose collers.	:	Work done up to the billed quantity is satisfactory
21	Fabricating ,Supplying and mounting MS Box made out of 16swg suitable for floor mounting , fully weather proof with provision for better dissipation provided with hinged front cover,equipped with tamper proof locking arrengements with suitable size	:	Work done up to the billed quantity is satisfactory
22	Supplying and fixing angle iron frame work Fabricated out of MS angle iron and MS flat with bolts nuts washers,etc and painted with two coats of Red oxide and pants	:	Work done up to the billed quantity is satisfactory
23	Supplying and fixing 20" x 20" x 2.5" polished wood board made of not less than 15mm thick plank on both the sides with planks made out of not more than 2 pieces and fixing the same to the	:	Work done up to the billed quantity is satisfactory
24	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. 50-63Amps TPN	:	Work done up to the billed quantity is satisfactory
25	Supplying, fixing and wiring Earth Leakage Miniature Circuit Breaker (ELMCB) 240/450V up to 300mA sensitivity on existing wood/panel board	:	Work done up to the billed quantity is satisfactory

Address:
1#125, First Floor, Sri Kumbeshwara Sahakara Bank Building, 2nd cross, 3rd main, Ramaiah layout, Nagasandra post, Bangalore - 560073
GSTIN: 29CJJPA0915Q1ZW
: consultantcivildesign@gmail.com
: +91 86605 99020

Sl.No	Description of the Item		Comments / observations
26	Supplying of TPST with rewirable porcelain channels in SM encloser made out of 14 SWG powder coated point of approved colour 63 amps	:	Work done up to the billed quantity is satisfactory
27	Supplying and fixing of LED type panel board indicating lamp with required colour suitable for 230/440v A.C. 50 Hz 12/24v D.C.	:	Work done up to the billed quantity is satisfactory
28	Suppling fully automatic star delta starter unit push button type with suitable wires 2 conductors and adjustable thermal timer mounted on a common base plate held in steel enclosure for use on 400/440 volts phase and wired after	:	Work done up to the billed quantity is satisfactory
29	Supplying and fixing single phase preventer using necessary wires over an existing panel board suitable for motar up to 20 HP capacities	:	Work done up to the billed quantity is satisfactory
30	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade multistrand copper conductor single core wire in open or concealed system of wiring as per IS 694:1990 &	:	Work done up to the billed quantity is satisfactory
31	Supplying fixing and wiring heavy duty low voltage capacitors conforming to IS 2834 phase 400/440 volts grade, for power factor improvement of rotating machinery.	:	Work done up to the billed quantity is satisfactory
32	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C cotouts and other equipments on the meter board using 40mm dia 2.90 thick GI pipe 2.5 mtr long buried in a pit... The pit should be filled with equal proprotion of salt and charcoal 150mm alround the pipe to complete depth. The connection from the to the	:	Work done up to the billed quantity is satisfactory
33	Digging of trench of 0.36mtrs deepx0.5 mtrs wide refilling the trench to the required gorund level and consolidating etc., complete hard soil	:	Work done up to the billed quantity is satisfactory

Address:
1#125, First Floor, Sri Kumbeshwara Sahakara Bank Building, 2nd cross, 3rd main, Ramaiah layout, Nagasandra post, Bangalore - 560073
GSTIN: 29CJJPA0915Q1ZW
: consultantcivildesign@gmail.com
: +91 86605 99020

Sl.No	Description of the Item		Comments / observations
34	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975 4 core 16 sqmm	:	Work done up to the billed quantity is satisfactory
35	Labour charge for laying 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe/ on wall / on poles as required in existing trench/duct. 6 sq mm to 16 sq mm	:	Work done up to the billed quantity is satisfactory
36	Supplying and fixing class-A(medium duty) GI pipe wall thickness not less then 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1KV class 40mm	:	Work done up to the billed quantity is satisfactory
37	Supplying and fixing LT cast iron pot heads suitable for 1.1KV class UG cable filled with necessary bitumen / insulating compound complete with terminals,clamps bolts and nuts and washer etc.,complete for 16 sq mm as per specifications.	:	Work done up to the billed quantity is satisfactory
38	Supplying and fixing porcelain fuse channel with cut out on the existing wooden block and wiring complete 63 amps	:	Work done up to the billed quantity is satisfactory
39	Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. after breaking of clods	:	Work done up to the billed quantity is satisfactory
40	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings, this includes jointing of pipes and fittings with one step CPVC solvent cement and testing of joints	:	Work done up to the billed quantity is satisfactory
41	Making connection of G.I.distribution branch with G.I.main of 25mm to 40mm. Nominal bore, including	:	Work done up to the billed quantity is

Address:
1#125, First Floor, Sri Kumbeshwara Sahakara Bank Building, 2nd cross,
3rd main, Ramaiah layout, Nagasandra post, Bangalore - 560073
GSTIN: 29CJJPA0915Q1ZW
consultantcivildesign@gmail.com
: +91 86605 99020

Sl.No	Description of the Item		Comments / observations
42	Stone dust / Grit 4.75 mm to 0.075 mm	:	Work done up to the billed quantity is satisfactory
43	KSRB 2-4 : Refilling available around earth pipe lines,cables in layers mot exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. And lift upto 1.5m. Including cost of all labour complete as per specifications.	:	Work done up to the billed quantity is satisfactory
44	Loading and unloading of stone boulder/stone aggregates/sand/kanker/ moorum. KSRRB M100-1:Placing tipper at loading point, loading with front end loader,dumping, turning for return trip, excluding time for haulage and return trip complete as per specification MORTH Chapter 1	:	Work done up to the billed quantity is satisfactory
45	KSRB 2-4 : Providing and fixing in position brass gate valve with C.I.wheel of approved quality (screwed end) 50mm nominal bore including cost of all materials,labour and HOM of equipments with all leads complete as per specifications.	:	Work done up to the billed quantity is satisfactory
46	KSRB13-6.2-1 : Providing and fixing in position brass stop cock of approved quality 15mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications.	:	Work done up to the billed quantity is satisfactory
47	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and	:	Work done up to the billed quantity is satisfactory
48	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications. Clause 502 of MORTH V revision	:	Work done up to the billed quantity is satisfactory
	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates	:	Work done up to the billed quantity is satisfactory

Address:
1#125, First Floor, Sri Kumbeshwara Sahakara Bank Building, 2nd cross,
3rd main, Rajalakshmi Layout, Nagadevanahalli Post, Bangalore-560056
GSTIN: 29CJJPA0915Q1ZW, 0
consultantcivildesign@gmail.com
+91 86605 99020

Sl.No	Description of the Item		Comments / observations
50	KSRRB M500-10. Providing and applying tack coat using 80/100 grade bitumen(VG10) in boiler fitted with spray set distributor at the rate of 0.25 kg per sqm on the existing prepared bituminous surface cleaned with mechanical broom. (primed	:	Work done up to the billed quantity is satisfactory
51	KSRRB M500-19. Providing and laying bituminous concrete using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and	:	Work done up to the billed quantity is satisfactory
52	Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches,	:	Work done up to the billed quantity is satisfactory
53	Providing and laying in position plain cement concrete of Mix 1:4:8 with OPC @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregates @ 0.57cum	:	Work done up to the billed quantity is satisfactory
54	Providing and laying in position reinforced cement concrete of Design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine aggregtes @ 0.47cum,	:	Work done up to the billed quantity is satisfactory
55	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications.	:	Work done up to the billed quantity is satisfactory
56	Providing and fixing RCC precast cover slab of 250 mm thick for Chamber in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including formwork, lift charges, curing and concrete finished surfaces on both sides etc., complete as per drawing and directions of	:	Work done up to the billed quantity is satisfactory
57	KSRB 4.9.2 : Providing T .M.T Steel reinforcement for R.C.C work including straightening, cutting	:	Work done up to the billed quantity is satisfactory

Address:
1#125, First Floor, Sri Kulmbeshwara Sahakara Sangh Building, 2nd cross,
3rd main, Ramaiah layout, Nagasandra post, Bangalore - 560073
GSTIN: 29CJJPA0915Q1ZW
consultantcivildesign@gmail.com
: +91 86605 99020

Sl.No	Description of the Item		Comments / observations
58	Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches,	:	Work done up to the billed quantity is satisfactory
59	Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement 180kgs,with 40mm and down size graded granite metal coarse aggregates @ 0.85cum and fine aggregates @o.57 cum machine mixed, concrete	:	Work done up to the billed quantity is satisfactory
60	Providing and constructing granite/trap/basalt size stone masonry in basement with cement mortar 1: 6 stone chistel dressed in courses not less than 15 cms high bond stones at two m apart in each course including cost of materials, labour, curing complete as	:	Work done up to the billed quantity is satisfactory
61	Providing and laying in position plain cement concret of mix 1:2:4 with cement @ 240kgs with 20mm and down size graded granite metal coarse agregates @ 0.69cum and fine aggregates @ 0.459 cum, machine	:	Work done up to the billed quantity is satisfactory
62	Providing and constructing load bearing wall with solid concrete blocks of size 400x150x200 mm having block density not lessthan 1800 kg/m3 and having a minimum average compressive	:	Work done up to the billed quantity is satisfactory
63	Providing and laying in position reinforced cement concrete of design mix M25 with OPC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregtes @ 0.47cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed 2008, machine mixed, concrete laid in layers not exceeding 15 cms thick,	:	Work done up to the billed quantity is satisfactory
64	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and	:	Work done up to the billed quantity is satisfactory
65	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work	:	Work done up to the billed quantity is satisfactory

Address:
1#125, First Floor, Sri Kumbeshwara Sahaka Co-Bank Building, 2nd cross,
3rd main, Ramaiah layout, Nagasandra post, Bangalore-560073
GSTIN: 29CJJPA0915Q1ZW
consultantcivildesign@gmail.com
: +91 86605 99020

Sl.No	Description of the Item		Comments / observations
66	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for flat surface such as suspended floors, roofs, landings, balconies and likes, thickness above 200 mm including cost of all materials, labour complete as	:	Work done up to the billed quantity is satisfactory
67	Providing and laying/fixing cement base, precast, pre polished cement concrete, designer tiles 25mm thick for flooring conforming to IS 1237 heavy duty tiles for flooring, treads of steps and landing, laid on a bed of 12mm thick cement mortar 1:3 mis finished with flush	:	Work done up to the billed quantity is satisfactory
68	Providing and fixing colour glazed tiles of size 300mmx600mm for walls with borders of size 300x100mm, set in Cement Mortar 1:3 and pointed with white cement with matching colour pigment with necessary curing, cleaning including	:	Work done up to the billed quantity is satisfactory
69	Providing 18mm thick cement plaster in single coat with cement mortar 1:3 to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding,	:	Work done up to the billed quantity is satisfactory
70	KSRB15-3 : Providing 15mm thick cement plaster in single coat with cement mortar 1:3 to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing	:	Work done up to the billed quantity is satisfactory
71	KSRB 15-16.1 : Providing and finishing external walls in two coats with waterproof cement paint of approved brand and shade to give an even shade after throughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications.	:	Work done up to the billed quantity is satisfactory
72	Providing and applying two coats with oil bound washable distemper of approved brand and shade on wall surface including priming coat with distemper primer after throughly brooming the surface free from mortar drpos and other foreign matter including preparing the surface even as sand paper	:	Work done up to the billed quantity is satisfactory

Sl.No	Description of the Item		Comments / observations
73	KSRB 7.5 : Providing and fixing pull and push type rolling shutters of approved make out of 18 guage, 75mm wide cold rolled steel laths of convex corrugation, with side guides and bottom rail, with interlocking arrangements for steel laths by means of alternate clips, suspension shaft with High tension coil type springs two numbers, mounted on specially designed pipe shaft, with bracket plates, guide channels, ball bearing arrangements, for inside & outside locking with push & pull operations	:	Work done up to the billed quantity is satisfactory
74	Supplying and installation of 2000 LPH RO drinking water treatment plant comprising of raw water storage tank, anlt scaling dosing system with pump and tank sand filter activated carbonfilter, high pressure pump R.O membranes, R.O pressure	:	Work done up to the billed quantity is satisfactory

For CIVIL DESIGN CONSULTANTS AND ENGINEER

Authorised Signatory

CIVIL DESIGN CONSULTANTS Bangalore

Address:
1#125, First Floor, Sri Kumbeshwara Sahakara Bank Building, 2nd cross, 3rd main, Ramaiah layout, Nagasandra post, Bangalore - 560073
GSTIN: 29CJJPA0915Q1ZW
: consultantcivildesign@gmail.com
: +91 86605 99020